
Camera-trapping sessions in Macedonia and Albania
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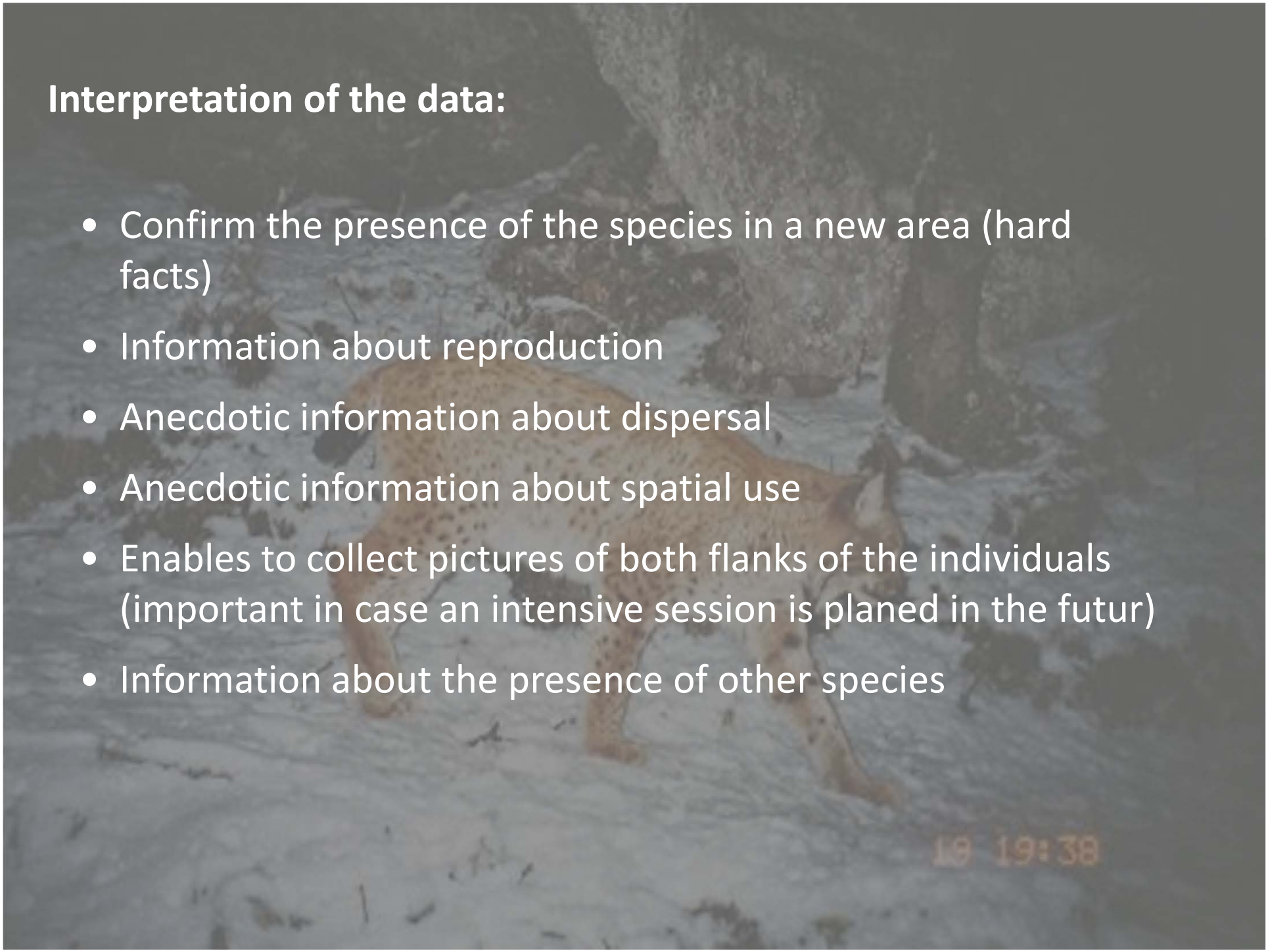
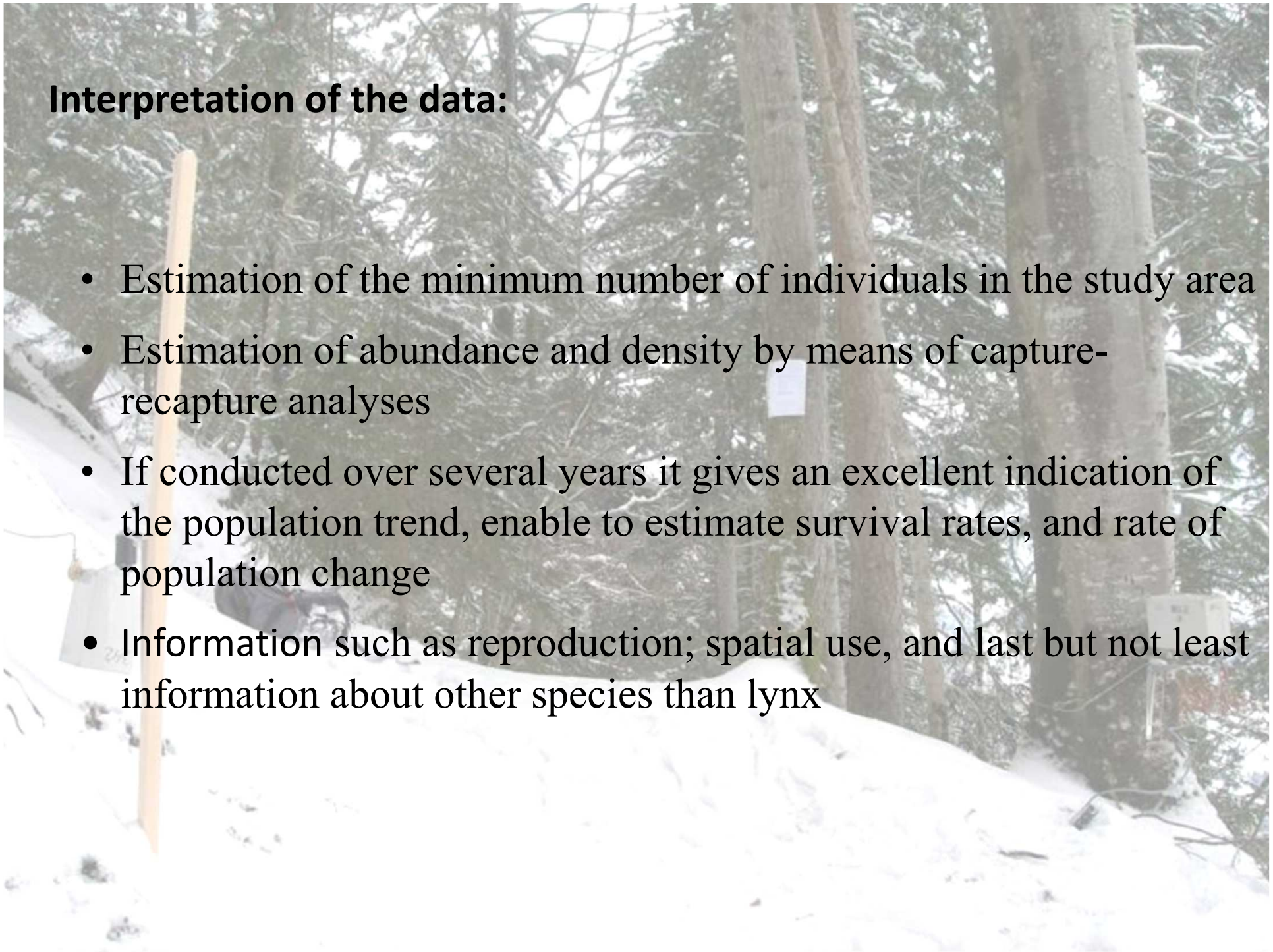


Interpretation of the data:

- Confirm the presence of the species in a new area (hard facts)
- Information about reproduction
- Anecdotic information about dispersal
- Anecdotic information about spatial use
- Enables to collect pictures of both flanks of the individuals (important in case an intensive session is planed in the futur)
- Information about the presence of other species



Interpretation of the data:

- Estimation of the minimum number of individuals in the study area
- Estimation of abundance and density by means of capture-recapture analyses
- If conducted over several years it gives an excellent indication of the population trend, enable to estimate survival rates, and rate of population change
- Information such as reproduction; spatial use, and last but not least information about other species than lynx

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ESTIMATING TIGER *Panthera tigris* POPUL FROM CAMERA-TRAP DATA USIN CAPTURE—RECAPTURE MODELS

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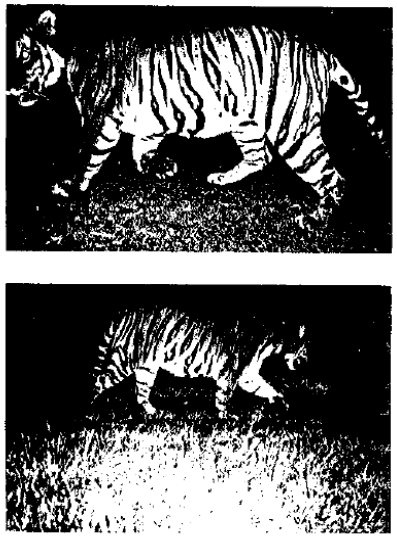

Fig. 3. Example of the asymmetry of stripe patterns on two flanks of the same animal (radiocollared tigress T-002).

Table 2. Capture histories of individually identified tigers in Nagarahole, India

ID no.		Capture history[a]
T-002	Adult female, radiocollared	011110101
T-003	Adult male, radiocollared	000110000
T-004	Adult male, radiocollared	001011101
T-102	Subadult female	100000000
T-103	Adult male	110001101
T-104	Subadult male	100000000
T-105	Adult female	101000000
T-107	Subadult female	000110000
T-108	Adult female	000000101
T-110	Adult male	000000011

[a]1, capture; 0, no capture. The nine sequential positions of these notations represent the successive sampling occasions during 1991–92.

Table 3. Summary of capture–recapture statistics for tigers obtained from camera-trap sampling in Nagarahole, India, during 1991–92

	Sampling occasion (j)								
	1	2	3	4	5	6	7	8	9
Animals caught (n_j)	4	2	3	3	4	2	4	1	5
Total caught (m_j)	0	4	5	6	8	8	8	9	10
Newly caught (μ_j)	4	1	1	2	0	0	1	1	0

n_j, no. of animals captured on the jth sampling occasion.
m_j, no. of previously caught animals before the jth sampling occasion.
μ_j, no. of new animals captured in the jth sample.

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- Count statistic is smaller than actual number of individuals present

- (*C*) is the total number of individuals caught (pictured) and (*N)* is the true number of individuals

$$C = pN$$

where *p* the sampling fraction is unknown

⇒ Capture recapture models enables to estimate *p*

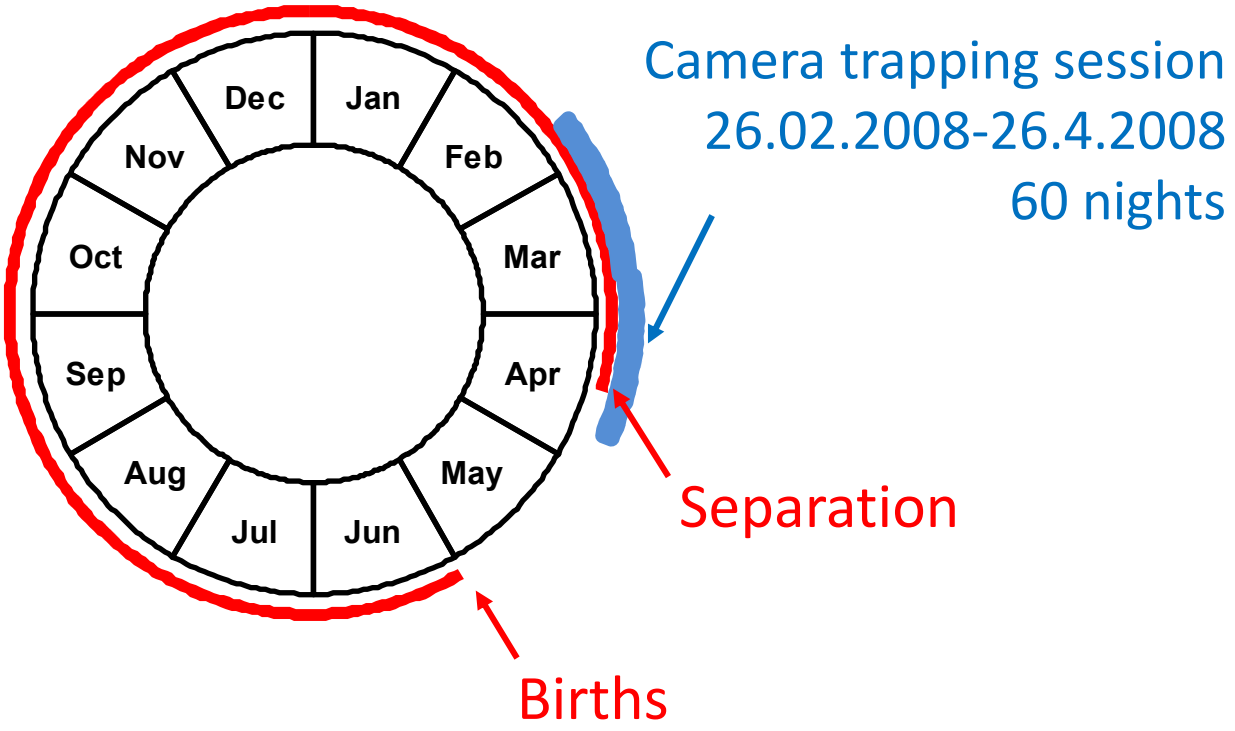
⇒ Enables to estimated the total number of individuals including those that were never pictured

Method of camera-trapping (extrensive and intensive)

Extensive camera-trapping


30. 1:33

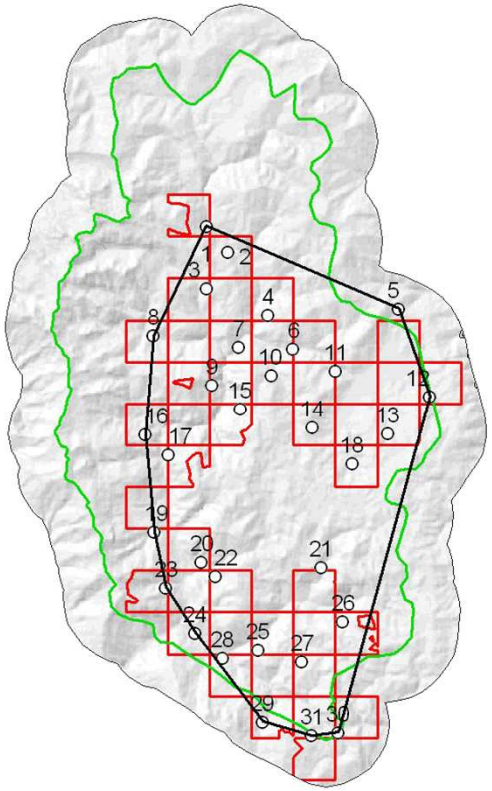
Timing of the study in comparison with lynx life cycle



⇨ Increased capture probability in winter (movements!)

⇨ Sampling period 60 nights ≈ assumed closed population

First intensive camera-trapping session in NP Mavrovo, Macedonia in 2008



32 locations

Area of 436 km²
Duration: 60 days

- Good locations for setting camera-traps (forest roads, hiking paths and game trails)

Individuals' identification

Village of Bibaj

Village of Vrbjani

Individuals' identification

Village of Bibaj

Village of Belichica

Code:

U = could not be identified

L = only left flank

R = only right flank

B = both flanks

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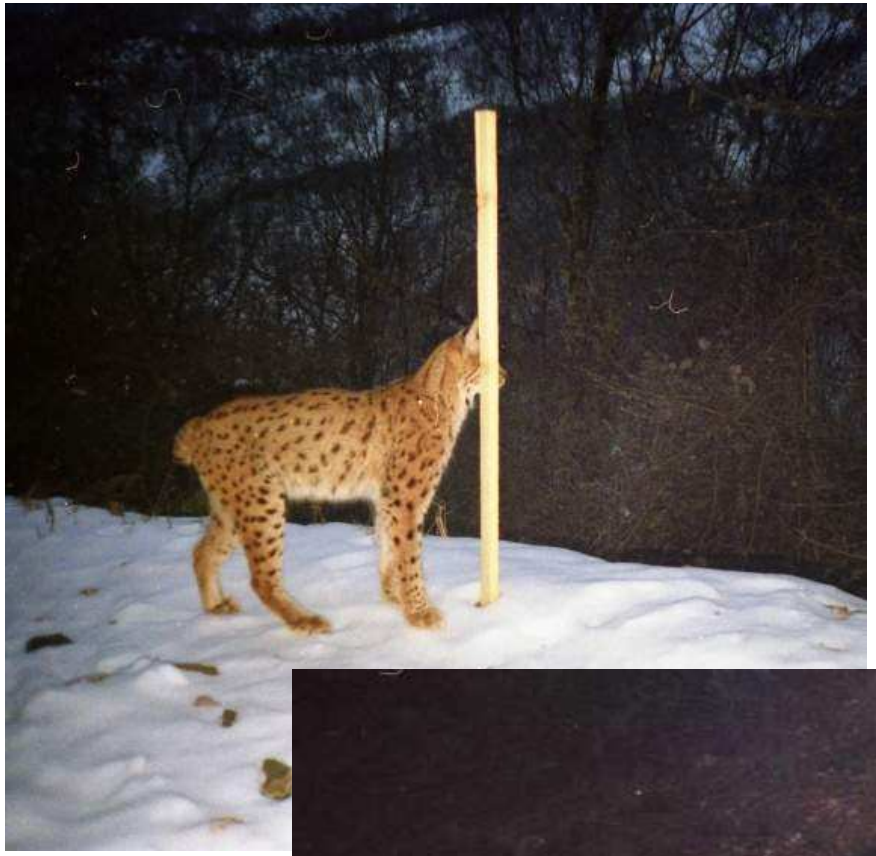
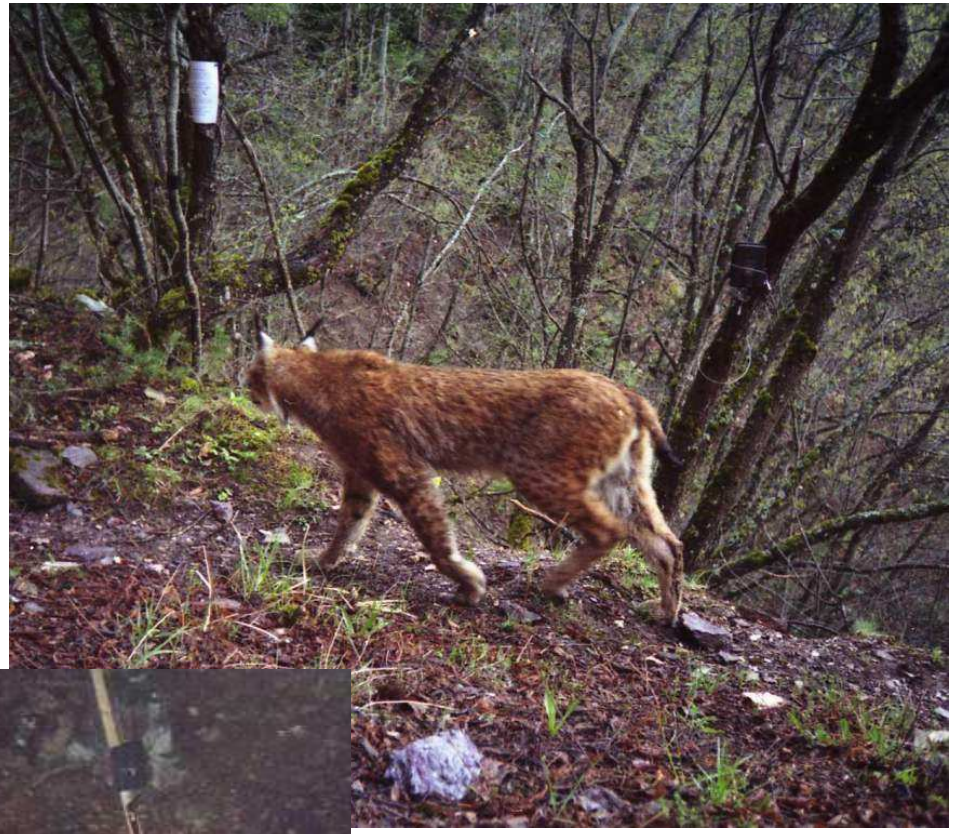
Results

- 29 lynx pictures (10 right and 16 left flanks, 3 unclear) at 9 camera-trapping sites
- Seven times both flanks of a lynx individual were taken simultaneously
- First analysis showed that 7-10 individuals can be distinguished
- 13 brown bear, 7 wolf, 10 red fox, 6 wildcat, 12 badger, 47 wild boar, 28 chamois, 36 roe deer and 30 brown hare photos were pictured





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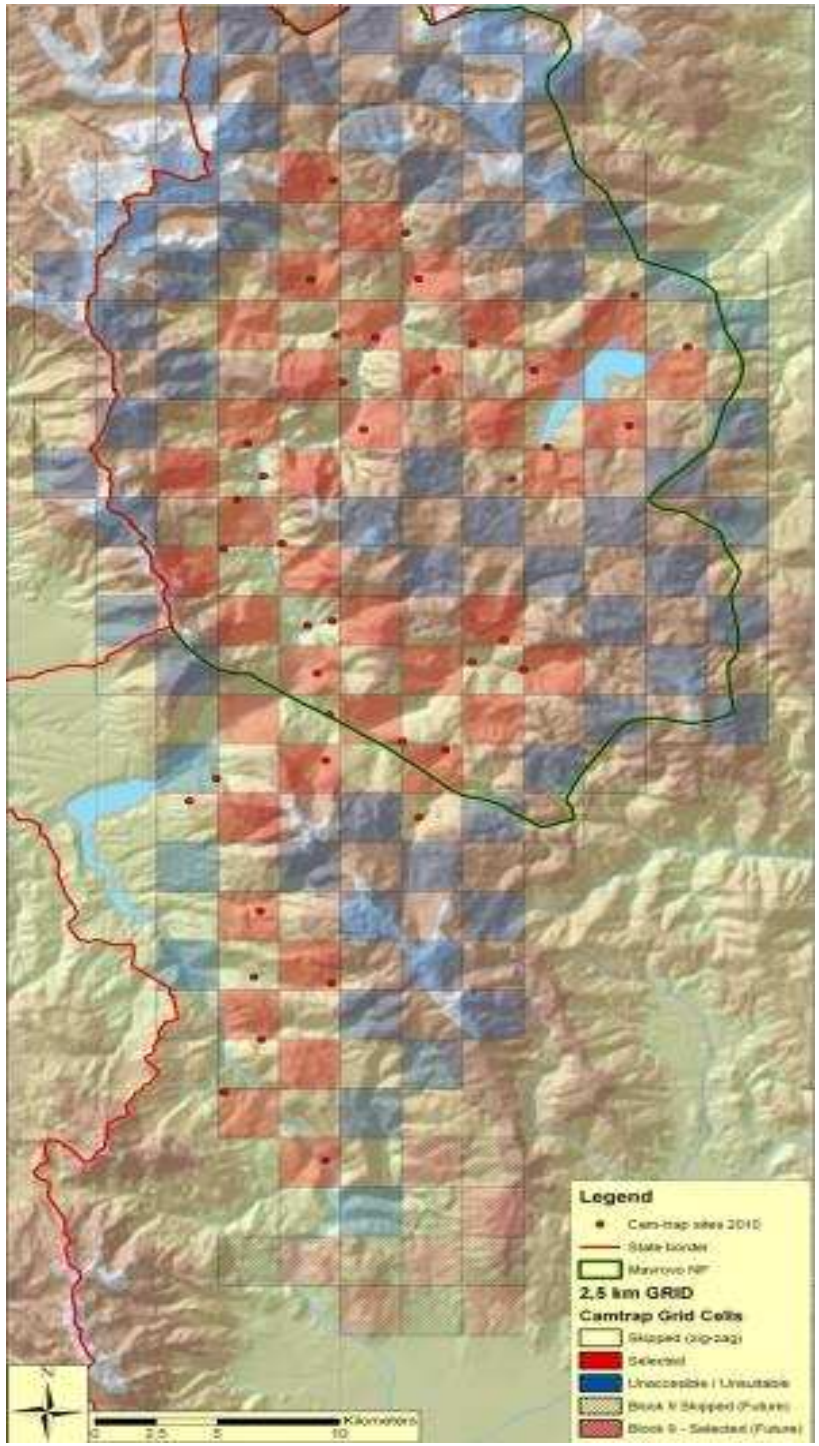
Second intensive camera-trapping session in Mavrovo NP, Macedonia in 2010

- 80 camera-traps at 40 different sites
- Area of 550 km^2
- Time period: 5th of March -5th of May (60 days)
- 24 lynx pictures from 10 different localities



- **The analysis showed presence of 9±3,24 lynx individuals in Mavrovo NP and its surroundings**

- **Correspondent density was 0,82±0,29 ind./100km²**

- **721 pictures of other animals: 190-brown hare, 149-badger, 98-marten, 88-fox, 66-wild boar, 38-wolf, roe deer-36, 22 bear, wild cat and 17 chamois.**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The first extensive camera – trapping session in Shebenik-Jabllanica NP, Albania in 2009.

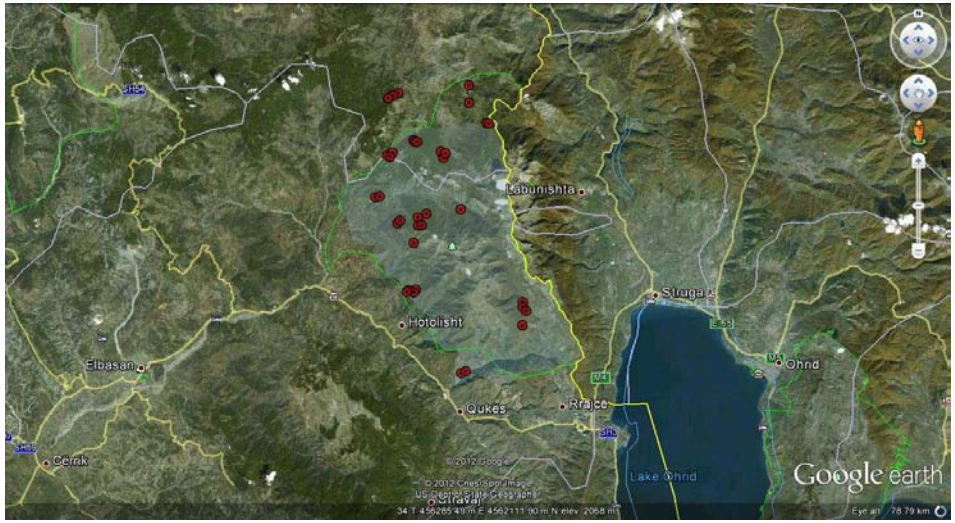
- 38 camera- trapping in Shebenik- Jabllanica mountain.

- Time period : March- April

- **No lynx present**

- **39 pictures of animals**

15-fox, 5 wildcat, 2 roe deer, 5 brown hare, 2 bear, 7 marten, 1 badger



The second extensive camera- trapping session in Shebenik-Jabllanica NP, Albania in 2010-2011

- 42 camera – trapping at 4 different sites
- Time period : February - May

- **The first alive photo of lynx in Puka region, Albanai**

- **486 of animal photos**

Marten 55, Badger 69, fox 136, squirrel 2,brown hare 155, wolf 12, bear 16, wildcat 9, hedgehog 4,Roe deer 22, wild boar 2, birds 3.

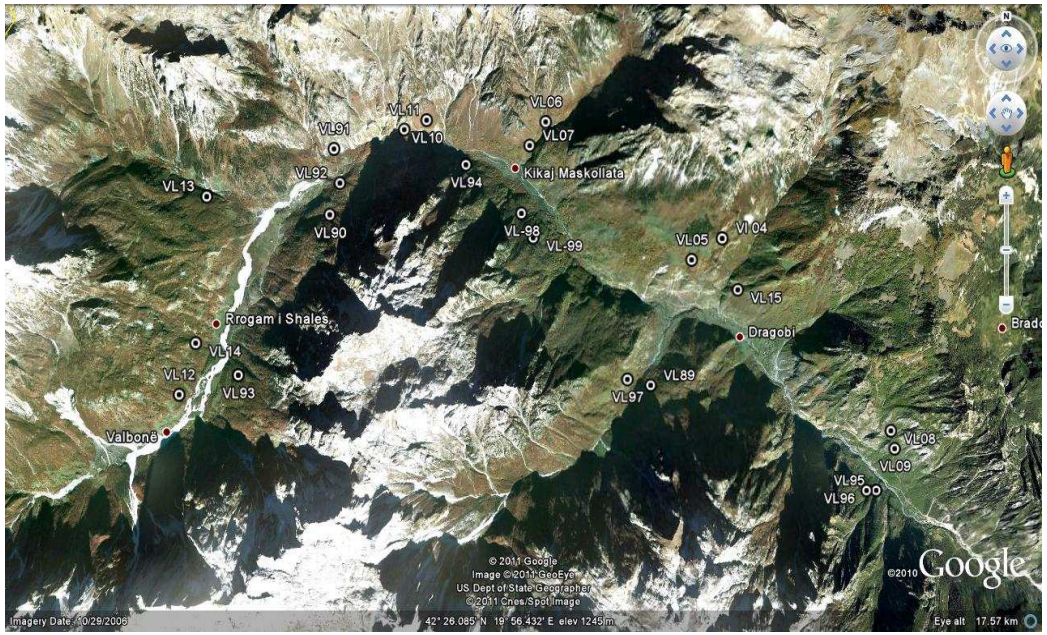
The first photo in Munella mauntain

The third extensive camera – trapping session in different regions of Albania 2011-2012.

•59 camera-trapping at 9 different sites
•Time period: September 2011 - July 2012

•**Two Photos of lynx in Puka region (Munella mountain)**

•**982 animal photos**
Marten 113, badger 119, fox 348, squirrel 1,wild boar 5,brown hare 246, wolf 19, bear 43, wild cat 37, hedgehog
14 , chamois 3, roe deer 29, birds 3.



The fourth extensive camera – trapping session in different regions in Albania is continuing …

- 20 camera- trapping so far are in field work at 3 different sites
- Time period: from September and continuing

- **The first alive photo of lynx in Shebenik- Jabllanica NP**

- **424 animals photo**

Fox 227, roe deer 3, wildcat 8, wolf 5, badger 19, bear 45, hare 75, marten 37, wild boar 1, hedgehog, chamois 1.

Chamois photo in Munella mauntain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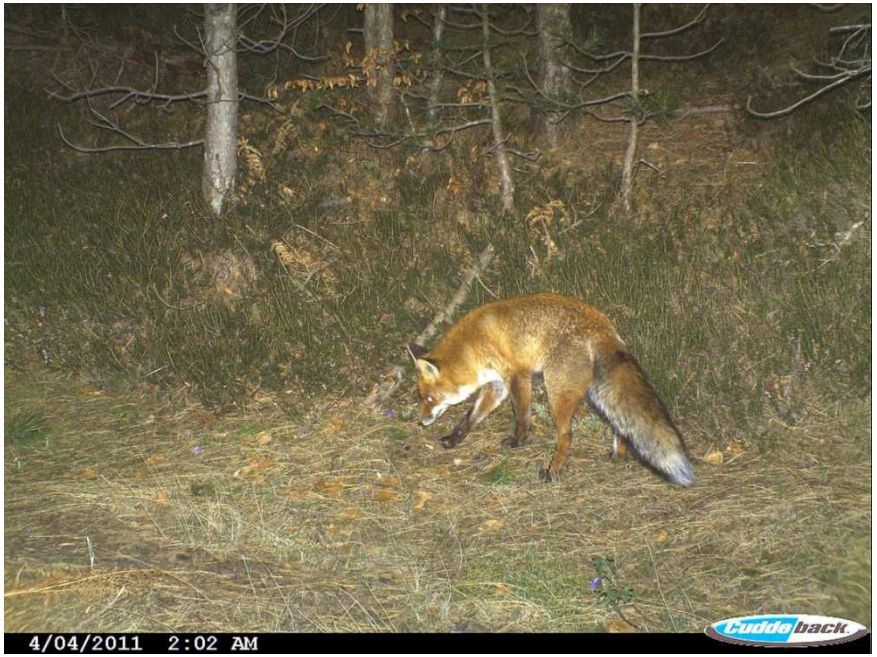
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Thank you